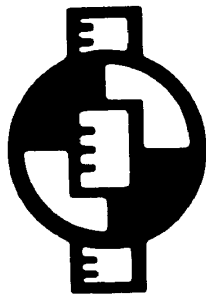


CHAPTER 28



ENGINEERING AIDE (EA)

NAVPERS 18068-28D

CH-53

Updated: January 2013

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NAVY ENLISTED OCCUPATIONAL STANDARD

FOR

ENGINEERING AIDE (EA)



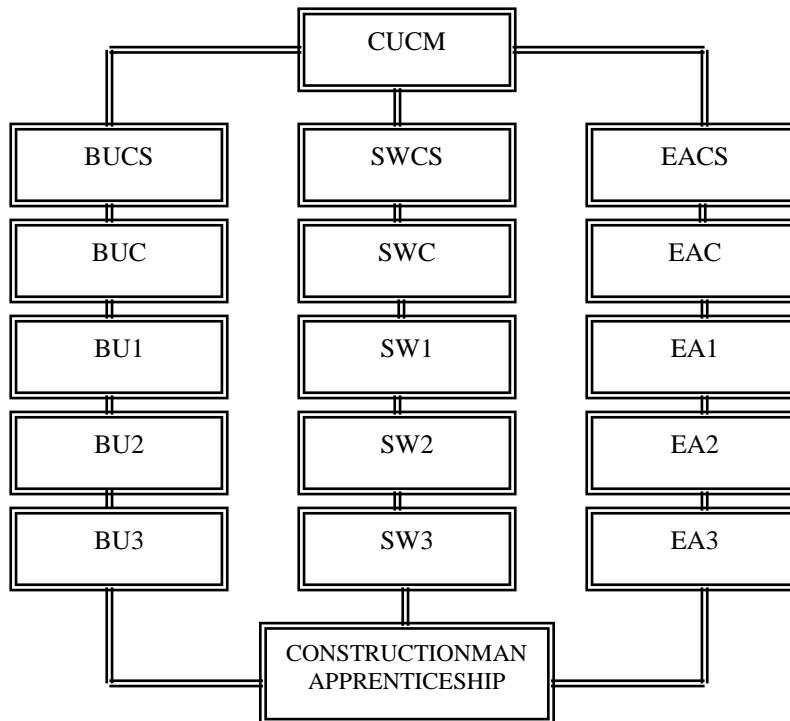
SCOPE OF RATING

Engineering Aides (EA) plan, supervise, and perform tasks required in construction surveying, drafting, materials testing, and construction management; establish control survey points, run traverses, obtain and convert field notes into topographic maps, and stake out for excavations; prepare, edit, and reproduce construction drawings; maintain systems to test and design aggregate mixes for soil-cement, concrete, and bituminous applications; prepare timekeeping records, construction schedules, and planning and estimating, quality control and progress reports; maintain individual combat readiness; and perform tasks required in combat and disaster preparedness or recovery operations.

This Occupational Standard is to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) as Chapter 28.

GENERAL INFORMATION

CAREER PATTERN



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories can be found in OPNAVINST 1420.1.

For rating entry requirements, refer to MILPERSMAN 1306-618.

SAFETY

The observance of Operational Risk Management (ORM) and proper safety precautions in all areas is an integral part of each billet and the responsibility of every Sailor; therefore, it is a universal requirement for all ratings.

NEBC Job Title**Engineering Aide****NEBC Job Code****001160****Job Family**

Architecture and Engineering

NOC

TBD

Short Title (30 Characters)

ENGINEERING AIDE

Short Title (10 Characters)

ENG AIDE

Pay Plan

Enlisted

Career Field

EA

Other Relationships and Rules

NEC's 5501, 5503, 5708, 5712, 5931, 5932, 5933, 6021, 9920.

Job Description

Engineering Aides plan, supervise, and perform tasks required in construction surveying, drafting, materials testing, and construction management; establish control survey points, run traverses, obtain and convert field notes into topographic maps, and stake out for excavations; prepare, edit, and reproduce construction drawings; maintain systems to test and design aggregate mixes for soil-cement, concrete, and bituminous applications; prepare timekeeping records, construction schedules, and planning and estimating, quality control and progress reports. As project managers, they plan, staff, direct, and control multiple construction projects to include problem solving, planning, estimating, scheduling, cost control, and personnel management ensuring compliance with specifications, code requirements, plans, and contracts; and act as project supervisors and trainers for junior personnel.

DoD Relationship**Group Title**

Construction, General

DoD Code

171000

O*NET Relationship**Occupation Title**

Civil Engineering Technicians

SOC Code

17-3022.00

Job Family

Architecture and Engineering

Skills*Critical Thinking**Active Listening**Management of Personnel Resources**Management of Material Resources**Judgment and Decision Making**Mathematics**Quality Control Analysis**Coordination**Equipment Selection**Operation and Control***Abilities***Deductive Reasoning**Information Ordering**Inductive Reasoning**Problem Sensitivity**Written Comprehension**Manual Dexterity**Mathematical Reasoning**Oral Expression**Reaction Time**Response Orientation***CONSTRUCTION DESIGN****Paygrade****Task Type****Task Statements**

E4

CORE

Compute bituminous mix design proportions

E4

CORE

Compute concrete mix design proportions

E4

CORE

Compute soil-cement mix design proportions

E5

CORE

Develop drainage grading plans

E5

CORE

Interpret electrical component design principles

E5

CORE

Interpret heavy construction design principles

E5

CORE

Interpret mechanical component design principles

E5

CORE

Interpret structural members design principles

CONSTRUCTION MANAGEMENT**Paygrade****Task Type****Task Statements**

E6

CORE

Develop construction project packages

E5

CORE

Develop three-phase construction and quality control plans

E4

CORE

Inspect construction materials

E6

CORE

Inspect construction projects

E7

CORE

Manage construction project quality control operations

E6

CORE

Manage construction project resources

E7

CORE

Manage multiple construction projects

E4

CORE

Operate construction management software

E4

CORE

Organize construction project plans

E7	CORE	Review construction project packages
E5	CORE	Schedule construction projects
E5	CORE	Supervise construction project quality control measures
E5	CORE	Supervise construction project safety procedures
E6	CORE	Supervise construction site operations

DRAFTING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Develop construction plans with Computer-Aided Drafting (CAD) software
E4	CORE	Interpret construction drawings
E4	CORE	Plot construction drawings
E5	CORE	Prepare construction drawings
E5	CORE	Prepare topographic maps

ENGINEERING TECHNICAL SUPPORT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Calculate engineering and construction design problems
E6	NON-CORE	Inspect buildings for repairs
E4	CORE	Maintain engineering technical library
E4	CORE	Maintain engineering tool kits
E5	NON-CORE	Maintain technical plan files and records
E7	CORE	Manage engineering shop operations
E6	NON-CORE	Prepare construction project specifications
E5	CORE	Prepare unit operational reports
E6	NON-CORE	Prioritize construction projects
E5	CORE	Supervise engineering crews
E6	CORE	Supervise engineering shop operations

MATERIALS TESTING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Conduct soils analysis
E6	CORE	Supervise batch plant operations
E5	CORE	Supervise batch plant quality control programs
E4	CORE	Test asphalt materials
E4	CORE	Test concrete materials
E4	CORE	Test soil materials

SEABEE COMMON CORE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Apply combat life saving techniques
E4	CORE	Conduct tactical convoy operations
E4	CORE	Employ Advance Base Functional Component (ABFC) system
E4	CORE	Employ defensive tactics
E4	CORE	Employ grenades, mines, and pyrotechnics
E4	CORE	Employ land survival techniques
E4	CORE	Maintain crew-served weapons
E4	CORE	Maintain Personal Gear Issue (PGI)
E4	CORE	Maintain small arms
E4	CORE	Operate crew-served weapons

E4	CORE	Operate small arms
E4	CORE	Operate tactical communication equipment
E4	CORE	Patrol assigned area
E6	CORE	Perform command and control of a company
E4	CORE	Perform command and control of a fire team
E6	CORE	Perform command and control of a platoon
E5	CORE	Perform command and control of a squad
E4	CORE	Repair damaged airfields
E4	CORE	Set up Chemical, Biological, Radiological and Nuclear Explosive (CBRNE) defensive operations
E4	CORE	Support Disaster Recovery Operations (DRO)
E6	CORE	Support Maritime Prepositioning Force (MPF) operations
E6	CORE	Support unit mobilization operations

SURVEYING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Conduct construction surveys
E6	CORE	Conduct engineering surveys
E4	CORE	Employ Geographic Information Systems (GIS) software
E4	CORE	Employ Global Positioning System (GPS) surveying equipment

UNDERWATER CONSTRUCTION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	NON-CORE	Conduct oceanographic surveys
E5	NON-CORE	Conduct Offshore Petroleum Distribution System (OPDS) operations
E5	NON-CORE	Maintain diving equipment
E5	NON-CORE	Maintain diving support equipment
E7	NON-CORE	Manage demolition operations
E7	NON-CORE	Manage Naval Sea Systems Command (NAVSEA) system certifications
E7	NON-CORE	Manage Offshore Petroleum Distribution System (OPDS) operations
E7	NON-CORE	Manage underwater construction operations
E5	NON-CORE	Perform coxswain duties
E5	NON-CORE	Perform demolition operations
E5	NON-CORE	Perform diving emergency procedures
E5	NON-CORE	Perform diving operations
E5	NON-CORE	Perform salvage operations
E5	NON-CORE	Perform small craft operations
E5	NON-CORE	Perform underwater construction operations
E6	NON-CORE	Plan demolition operations
E6	NON-CORE	React to diver casualties
E6	NON-CORE	Supervise diving operations
E6	NON-CORE	Supervise Maritime Prepositioning Force (MPF) pre-offload operations
E6	NON-CORE	Supervise salvage operations
E6	NON-CORE	Supervise treatment of diving illnesses